NOTES FROM GB3 DIESEL RETROFIT AND ANTI-IDLING WORKSHOP
October 5th, 2004, 10am – 12:30pm
Tufts University, Ballou Hall, Coolidge Room

1. Opening Remarks and Introductions: Lucy Edmondson, Environmental Protection Agency (EPA) & Larry Dixon, Consensus Building Institute (CBI)

2. Christine Sansevero, EPA: "Why are we concerned about Diesel Exhaust?"

What is the EPA doing? Setting new standards for new diesel engines that take effect in 2007. The emission standards are so stringent that we won't see black smoke coming out of trucks and buses anymore. Cost-effective technology is available today to help reduce pollution from vehicles currently on the road. The EPA has set up a voluntary program to help reduce pollution from the current fleet through diesel retrofits. The Commonwealth has been a leader in reducing emissions through anti-idling programs. More information about diesel programs in New England is available at www.epa.gov/ne/eco/diesel or www.epa.gov/cleanschoolbus.

Most important starting point: Don't idle the bus. You will save money and also help keep the air cleaner.

What is a retrofit? A retrofit can be considered a "fancy" muffler or a device that filters the exhaust. The devices break down the exhaust into less harmful components, much like the catalytic converter in a car. There are several pollution control technologies available—oxidation catalysts, particulate matter filters, and cleaner fuels such as natural gas and biodiesel.

Question: How often do filters need to be cleaned?

Diesel particulate matter filters (DPFs) commercially available today are passive filters that rely on the heat of the exhaust to regenerate the filter. Therefore, in order to use a particulate matter filter, the exhaust temperature of the bus has to be tested in advance. Buses with high enough exhaust temperatures can use filters. Filters can reduce particulate matter by 90 percent. Generally, they should be cleaned every 60-100K miles. A diesel oxidation catalyst (DOC) never needs to be cleaned, but only reduces particulate matter by 20-30 percent.

3. Ellen Tohn, The Asthma Regional Council (ARC): Asthma and Air Quality
www.asthmaregionalcouncil.org

Diesel particulate matter is a leading cause of asthma. Ellen did a demonstration and had people breath in and out through a straw. She said this is what it feels like to breath with asthma. During an attack, mucus covers the airway, the airway swells and contracts. The number of kids with asthma has doubled between 1983 and 1995. Massachusetts has 12.3% of kids with asthma. Nearly one in five households has a child with asthma.

How to help reduce this number? Bus drivers and vehicle operators can practice "no idling" techniques. We need to properly maintain the buses and try to retrofit them. In Maine, the average bus is on the road for 14 years; in Rhode Island, it's 10-12 yrs. She advised people to look at the diesel toolkit the ARC has complied. Everyone can reduce idling – doing so requires a behavior change. But there are other methods for reducing diesel emissions as well, including proactive bus maintenance practices and retrofits.

Question: Asthma – small particulate matter can make you more sensitive. Would a child standing near a bus emitting particulates have an attack?

We are not sure. We do know that particulate matter can aggravate asthma. Elderly people are also a sensitive population and particulate matter can cause premature death. Bus drivers are also sensitive as they are frequently in and around buses.

4. Julie Ross, Massachusetts Department of Environmental Protection (DEP):

Julie trains school bus drivers across the state on ways they can reduce idling time. She cited the 31-year-old state anti-idling law and stated that school bus drivers must undergo 8 hours of training/yr. to maintain their Commercial Drivers License. Julie also provides training to professional school transportation companies. She has trained almost 1000 school bus drivers. The training has been well received and Julie has found that drivers are actually reducing their idling time. Contact Julie for a free copy of the school bus driver training video she uses.

The Massachusetts anti-idling law states if you are going to be stopped for longer than 5 minutes, you must turn off the engine. Julie advises drivers who know they going to be stopped for longer than 5 minutes to should shut down immediately and not wait 5 minutes. There are some exemptions such as if the vehicle needs servicing or the driver has to perform a pre-trip safety inspection. However, shutting down the engine could result in fuel savings of between ½ and 1 gallon per hour.

Question: Who regulates the idling? A workshop participant recounted a story where a bus was idling for two hours. The person went over and asked the driver to shut down but the driver wouldn't. The police were called but they never arrived. What can EPA/DEP do?

Because the Massachusetts anti-idling rule is both a law and a regulation, it can be enforced by the local police, by the DEP, and by the EPA. Last year, EPA took action against 11 bus operators at Logan airport as well as the Massachusetts Bay Transportation Authority (MBTA).

5. Bob Cerio, Energy Manager, Warwick Schools, RI:

Bob is the Energy Manager at the Warwick Public Schools and works in energy conservation and management. Some of his responsibilities include buying fuel, conducting energy audits, and writing grants for innovative energy projects that involve photovoltaics and biodiesel.

This year Warwick received a grant from the EPA to retrofit 40 buses with a combination of oxidation catalysts and particulate matter filters. In addition, all 70 buses in the fleet will be fueled with a blend of 80 % ultra-low sulfur diesel (ULSD) and 20% biodiesel. Since August 31st, this fuel mix has been used on all 70 school buses. Warwick is in the process of testing the exhaust temperature of the school buses to determine what buses can use particulate matter filters.

Warwick leases the buses and provides the fuel. Bus drivers are employees of First Student. Sprague Energy is only source of USLD in the Northeast. The Rhode Island Public Transit Authority (RIPTA) and the MBTA have retrofitted buses with particulate matter filters and are fueling them with ULSD.

Warwick has had a positive experience so far. 80-90 drivers will be trained annually on anti-idling practices. Warwick understands that cleaner school buses are in the best interest of the

town's collective health and they have introduced a no-idling policy in the city. The Rhode Island legislature is considering a state anti-idling law. RI Department of Environmental Management in partnership with the Asthma Regional Council has a plan to reach out to school officials, students and parents and provide information about diesel exhaust and the importance of anti-idling programs.

6. Kim Lundgren, Director of the Energy and Environment Office, City of Medford:

Kim is head of the Energy and Environment Office in Medford. In 2003, Medford received a grant from EPA to retrofit school buses with pollution controls. Vocell Bus Company owns and operates school buses for Medford. With the EPA grant funds, Vocell buses will be retrofitted with a combination of particulate matter filters and oxidation catalysts. The entire Vocell bus fleet of roughly 70 buses will be fueled with ULSD. In addition, Kim has launched anti-idling campaign that aims to engage the community, parents, and teachers.

Kim stressed that for areas that do not own their school buses, school bus contracts are important consideration when undertaking retrofit program. Kim advises directors to be sure to establish who owns the retrofit equipment and buses and to establish a relationship with contracted buses. Towns and cities can add requirements for retrofitted buses into their new contracts. School districts may be able to save money if the bus vendor installs technologies themselves. Getting the community involved is critical. Medford has incorporated public outreach into their project and had students go to the Vocell facility to watch the installation of technologies as part of the education process.

Question: If you have a very low budget, what could you implement (aside from anti-idling)?

Proper maintenance of buses can help dramatically. As far as pollution control technologies are concerned, oxidation catalysts are relatively inexpensive ($1,000 to $2,000) and easy to install.

Question: Is there data on the reduction of health related issues due to anti-idling?

We can calculate emission reductions associated with not idling, and we know that reducing pollution improves air quality. How pollution reductions directly translate into health benefits is more complicated. Any steps we take to reduce diesel particulate matter are important for public health given the risk associated with exposure to only a small amount of particulate matter.

7. Christine Sansevero, EPA: Summary of New Funding

On March 6th, 2003, the United States Department of Justice and the Environmental Protection Agency (EPA) finalized a settlement with Toyota Motor Corporation for Clean Air Act violations involving 2.2 million vehicles manufactured between 1996 and 1998. Under the terms of the settlement, Toyota will spend $20 million on a supplemental environmental project (SEP) to retrofit school buses with particulate matter filters and fuel them with ultra-low sulfur diesel fuel (ULSD).

Only school districts that own their buses can apply for funds. School districts located in "nonattainment areas" (areas not meeting national air quality standards for ozone and particulate matter) will have first priority.

The deadline for the expression of interest is November 12, 2004. A lottery (based in part on nonattainment status) will determine the group of school districts that can submit formal

applications for funding. The school districts selected through the lottery will receive notification by December 3, 2004. Formal applications from these school districts will be due 60 days after notification (February 1, 2005). School districts selected for funding will be notified in March 2005.

This is not an EPA grant program. To download more information and registration forms visit: http://www.cleanbusesforkids.com.

8. General Questions and Notes:

Q: What can the EPA do to help school bus transportation directors more?

- Help is needed from EPA, Department of Energy (DOE), EOEA, ARC to reduce school bus emissions. Guidance, assistance, resources, materials, etc.
- Is it possible to get these fuels on state contract?
- MA DEP's school bus driver training
- Securing ITS (intelligent transportation systems) infrastructure—e.g. getting information about train crossings so buses can potentially shut down if it will be a lengthy crossing.
- Utilizing education, Energy Conservation Ethic. It is important to educate the general population by securing grants and increasing public outreach. Warwick is producing outreach pamphlet through the public schools.
- ARC is trying to get at least one person in each school district to "own" the project and identify contacts at schools that are interested in reducing pollution and having better communication.
- TDM (transportation demand management). Use TDM in town meetings. Public outreach—have kids motivate parents.
- A palm card with the anti-idling law written on it would be useful to give to drivers to inform them. Boston Urban Asthma Coalition has such cards. It is not bus specific, but applies to all vehicles.
- MA Executive Office of Environmental Affairs also has multilingual palm cards to hand out to drivers to reduce idling (Tony Chaves is the contact, and can be reached at (617) 626-1009 or tony.chaves@state.ma.us). They would like to try for widespread distribution but the cards are not yet mass-produced.
- A more consistent and coordinated message coming from the EPA and through the state and local governments and schools would be useful to change behavior.
- Connect with area pediatricians to get information out on school bus emissions.
- Investigate ER asthma rates for immigrant populations.
- Public Health Data—can we see reductions? What are the ER v. doctor visit statistics?
- Increase information sharing and enforcement on anti-idling.
- Model specs to get technology and fuel onto state's contracts.

9. Websites of Interest

City of Boston tour bus information: http://www.cityofboston.gov/transportation/tour_bus.asp
City of Boston tour bus parking map: http://www.cityofboston.gov/transportation/pdfs/map.pdf
Database of state incentives for renewable energy: http://www.dsireusa.org

Contact Information:

Name	Phone	Email	Organization
Andy Frongillo	(781) 322-1710	drew30@ix.netcom.com	Dennis K. Burke Inc.
Barbara MacDonald	(617) 889-8410	bmacdonald@chelseama.gov	Chelsea Public Schools
Bob Cerio	(401) 934-3219 x. 320	cerior@wpsadmin.org	Warwick Public Schools
Christine Sansevero	(617) 918-1699	sansevero.christine@epa.gov	U.S. EPA
Dave Eagle	(781) 862-3400		C+W Transportation, Arlex Oil Corp, Lexington, MA
Dave Hegan		HeganDa@lynnschools.org	Lynn Public Schools
David Cash	(617) 626-1164	david.cash@state.ma.us	MA EOEA
David King	(781) 314-5415	dking@city.waltham.ma.us	Waltham Public Schools
Eileen Riley		eriley@gloucester.k12.ma.us	Gloucester
Elizabeth Shelton	(914) 328-6750	eshelton@spragueenergy.com	Sprague Energy
Ellen Tohn	(508) 358-7770	e.tohn@comcast.net	Asthma Regional Council of NE
Erick Quashie	(617) 559-9050	eric_quashie@newton.mec.edu	City of Newton
Eugene Benoit	(617) 918-1639	benoit.eugene@epa.gov	U.S. EPA
Evan Freund	(617) 513-3584	efreund@cbuilding.org	Consensus Building Institute; Asthma Regional Council
Frank DiChiappari	(781) 397-7271	fdichiap@malden.mec.edu	Malden Public Schools
Gevon Solomon	(617) 918-1513	solomon.gevon@epa.gov	U.S. EPA
Ginger Esty	(508) 872-7788	gingeresty@msn.com	Framingham Selectman; Boston MPO
Ingrid H. Klimoff	(781) 862-1112	iklimoff@rcn.com	Lexington Resident
Jennifer Dolin	(617) 918-1627	dolin.jennifer@epa.gov	U.S. EPA
Joanne Telegen	(617) 492-0404 x. 10	jtelegen@yahoo.com	Consensus Building Institute
John Pinzone	(781) 314-5420	jpinzone@city.waltham.ma.us	Waltham Public Schools
Julie Ross	(617) 292-5958	julie.ross@state.ma.us	MA DEP
Kathy Verga	(978) 282-3001	kverga@gloucester.k12.ma.us	Gloucester Public Schools
Kim Lundgren	(781) 393-2137	klundgren@medford.org	City of Medford Energy and Environment Office
Lucy Edmondson	(617) 918-1004	edmondson.lucy@epa.gov	U.S. EPA
Lugardy Raymond	(617) 635-3850	lugardy.raymond@ci.boston.ma.us	City of Boston
Marie MacDonald	(781) 447-4445	marie.macdonald@firstgroupamerica.com	First Student
Mary C. Pratt	(508) 435-4147	mpratt102@aol.com	Hopkinton MA Selectman; Boston MPO
Rick Iannelli	(781) 316-3503	riannelli@town.arlington.ma.us	Arlington Public Schools
Roberto Pena	(781) 396-2900	roberto.pena@mail.house.gov	Congressman Markey
Sheryl Mason	(781) 861-2564	smason@sch.ci.lexington.ma.us	Lexington Public Schools
Steven J. Levy	(914) 328-6770	slevy@spragueenergy.com	Sprague Energy
T.J. Hellmann	(617) 889-6080	tjhellmann@chelseacollab.org	Chelsea Green Space
Tony Chaves	(617) 626-1009	tony.chaves@state.ma.us	MA EOEA